

Pearl Perch (2020)

Glaucosoma scapulare



Anthony Roelofs: Department of Agriculture and Fisheries, Queensland, **John Stewart:** Department of Primary Industries, New South Wales

STOCK STATUS OVERVIEW

Jurisdiction	Stock	Stock status	Indicators
Queensland, New South Wales	Eastern Australia	Depleted	Biomass, Standardised Catch Rate, Fishery-Dependent Length and Age Frequency, Estimates of Total Mortality Rate, Catch and Effort

STOCK STRUCTURE

The Pearl Perch (*Glaucosoma scapulare*) is a relatively common demersal fish endemic to the central east coast of Australia. Pearl Perch generally form small schools around submerged reefs, pinnacles and rough rocky seabed in moderately deep water (up to 150 m) but may also move into shallow coastal waters throughout the day [McKay 1997]. Pearl Perch have a limited distribution from Rockhampton in Queensland (23°20'S) south to Port Jackson in New South Wales (33°50'S), but rarely occur south of Coffs Harbour (30°18'S) [Stewart et al. 2013]. Due to this limited distribution and influence of the prevailing southerly flowing Eastern Australian Current in distributing larvae across this area [Ridgway and Dunn 2003], Pearl Perch are considered to be a single biological stock [Stewart et al. 2015].

Here the assessment of stock status is presented at the biological stock level—Eastern Australia.

STOCK STATUS

Eastern Australia

The 2017 combined Queensland and New South Wales integrated statistical stock assessment (using catch, effort, length and age frequency data up until 2014) of the Eastern Australia stock estimated exploitable biomass at between 15 and 40 per cent of virgin (pre-1938) levels [Sumpton et al. 2017]. Four of the seven model scenarios estimated median biomass in 2014 to be at or below 20 per cent of virgin levels. Since 2014 standardised catch rates in Queensland have declined by a further 30 per cent [Wortmann 2020] and nominal catch rates in the New South Wales line fishery have increased slightly but remain at a relatively low level [Stewart 2020]. Fishery-dependent monitoring in Queensland and New South Wales show truncated commercial and recreational age

frequencies with absence of larger fish [Stewart 2011, Stewart et al. 2013, Stewart 2020]. Fishery dependent monitoring of age frequencies from 2008 to 2019 shows no clear signs of strong recruitment in Queensland waters. In New South Wales, length-based monitoring of commercial landings showed a steady increase in average lengths of the moderate sized fish between 2004–05 and 2014–15, with a lack of small fish observed in landings, indicative of poor recruitment during the decade [Stewart 2020]. A pulse of just legal-sized Pearl Perch were detected in landings during 2016–17 indicative of an improved recruitment; however there are no indications that the available biomass has yet increased above the limit. The stock is considered to be recruitment impaired.

Fishing mortality on the Eastern Australia stock of Pearl Perch was assessed as exceeding sustainable levels during the most recent stock assessment [Sumpton et al. 2017]. Historical landings greatly exceeded the estimated maximum sustainable yield from the stock, and fishing mortality was estimated to be above or near to natural mortality. Since that time the combined harvest from Queensland and New South Wales has been at historically low levels. Harvest levels from the southern component of the Queensland fishery (Fraser Offshore south) continue to decline. The commercial fishery in Queensland appears to have shifted north, with the few older fish observed in monitoring coming from this region. This spatial shift may be an indication that biomass has been subject to depletion in the main fishing area. Estimates of the recreational harvest in Queensland from 2019–20 (14 542 fish) increased slightly from 2013–14 (10 687 fish), however this is 73% below the 2000 estimate (53 555 fish) [Taylor et al. 2012, Webley et al. 2015, Teixeira et al. 2021]. Recreational catch rates have also decreased by approximately 58% since the 2000 survey estimate. Some of the reported drop in recreational harvest may be attributed to an increased minimum legal length (300 mm to 350 mm total length) and a reduced possession limit (from 10 to five) introduced in Queensland in 2002. In NSW the recreational harvest in terms of numbers of fish may have increased 3-fold since 2013–14 (consistent with a recruitment pulse into the fishery during 2016–17); however the survey results are not robust [Stewart 2020].

In Queensland, active commercial fishing licences and fishing effort days in 2019 were less than the previous three years [QFISH 2020] and effort had almost halved compared to the previous 10-year average. In New South Wales the number of days reported when Pearl Perch were landed in both trap and line fisheries are at or near historically low levels [Stewart 2020]. There is a minimum legal length of 300 mm total length for Pearl Perch in New South Wales and an increased (2019) 380 mm minimum legal size (increased from 350 mm) and reduced possession limit of four in Queensland (increased from 350 mm) that afford limited protection to juveniles. Despite these restrictions in fishing effort, the stock has shown no evidence of recovery.

This level of fishing mortality is expected to prevent the stock from recovering from its recruitment impaired state.

On the basis of the evidence provided above, the Eastern Australia biological stock is classified as a **depleted stock**.

BIOLOGY

Pearl Perch biology [McKay 1997, Sumpton et al. 2013]

Species	Longevity / Maximum Size	Maturity (50 per cent)
Pearl Perch	22–25 years, 700 mm TL, 7.3 kg	Females 2–4 years, 250–450 mm TL

DISTRIBUTION



Distribution of reported commercial catch of Pearl Perch

TABLES

Fishing methods		
	New South Wales	Queensland
Charter		
Hook and Line	✓	✓
Commercial		
Fish Trap	✓	
Line	✓	✓
Otter Trawl	✓	
Various	✓	
Recreational		
Hook and Line	✓	✓
Spearfishing	✓	✓

Management Methods		
	New South Wales	Queensland
Charter		
Bag and possession limits	✓	
Bag limits	✓	
Gear restrictions	✓	✓
Licence	✓	

Marine park closures	✓	
Possession limit		✓
Size limit	✓	✓
Spatial closures	✓	✓
Commercial		
Gear restrictions	✓	✓
Licence		✓
Limited entry	✓	✓
Marine park closures	✓	
Size limit	✓	✓
Spatial closures	✓	✓
Vessel restrictions	✓	✓
Recreational		
Bag and possession limits	✓	
Bag limits	✓	
Gear restrictions	✓	✓
Licence	✓	
Marine park closures	✓	
Possession limit		✓
Size limit	✓	✓
Spatial closures	✓	✓

Catch	New South Wales	Queensland
Commercial	8.37599 t	13.4235 t
Indigenous	Unknown	Unknown
Recreational	13 700 fish (2017–18)	14 542 fish retained in 2019–20

Queensland – Indigenous (management methods) for more information see

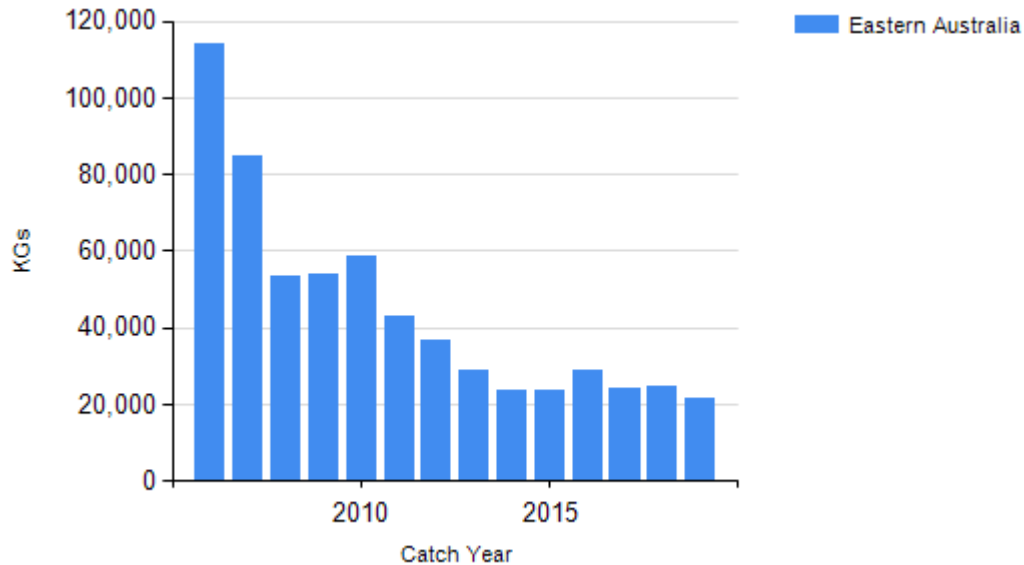
<https://www.daf.qld.gov.au/business-priorities/fisheries/traditional-fishing>

New South Wales – Recreational (Catch) Murphy et al. [2020].

New South Wales – Indigenous (Management Methods)

<https://www.dpi.nsw.gov.au/fishing/aboriginal-fishing>

CATCH CHART



Commercial catch of Pearl Perch - note confidential catch not shown

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